FUTURE FISHERIES IMPROVEMENT PROGRAM GRANT APPLICATION

All sections must be addressed, or the application will be considered invalid

I. APPLICANT INFORMATION

A. Applicant Name: Montana Trout Unlimited - Dr. David Brooks, Executive Director

Mailing Address: PO Box 7186

City: Missoula State: MT Zip: 59807

Telephone: 406.543.0054 E-mail: david@montanatu.org

B. Contact Person (if different than applicant): Chris Edgington, Jefferson Watershed Project Mgr.

Address: 630 Barnett Ave.

City: Dillon State: MT Zip: 59725

Telephone: 406.451.3035 E-mail: chris@montanatu.org

C. Landowner and/or Lessee Name (if different than applicant): USDA-USFS, Beaverhead-Deerlodge National Forest

Mailing Address: 420 Barrett St.

City: Dillon State: MT Zip: 59725

Telephone: 406-683-3988 E-mail: jamie.tripp@usda.gov

II. PROJECT INFORMATION

A. Project Name: Big Hole Divide Native Westslope Cutthroat Trout Security

River, stream, or lake: Browns Cr., Buffalo Cr., Painter Cr.

Location: Township: T8S Range: R13W Section: S29

Latitude: 45.111096 Longitude: -113.230103 *within project (decimal degrees)*

County: Beaverhead

B. Purpose of Project:

The purpose of this project is to secure three at-risk aboriginal populations of Westslope cutthroat trout (WCT) in the Beaverhead and Red Rock River sub-basins from non-native fish. Westslope cutthroat trout's *Oncorhynchus clarki lewisi* (WCT) historical range was the largest of all 14-cutthroat subspecies. WCT now occupy less than 5% of their historical range within the Upper Missouri River drainage in Montana.

In 1995, Montana Fish, Wildlife and Parks (FWP) formed the *Upper Missouri Westslope Cutthroat Trout Technical Committee,* with managers and scientists from the United States Forest Service, the Bureau of Land Management, and universities to make recommendations for conserving and restoring WCT in that geography (Shepard, et al 1997). In 2019, FWP published their guiding restoration document, *Westslope Cutthroat Trout Status and Conservation within the Beaverhead, Red Rock and Ruby River Sub-basins of Southwest Montana.* The highest priority conservation need identified in this document was to protect and secure all remaining at-risk WCT conservation populations by isolating them from non-native fishes, which this project seeks to accomplish.

Montana Trout Unlimited (MTU) has been and continues to be a critical partner in the preservation and restoration of Montana's *State Fish.* MTU's Jefferson Watershed Project Manager is coordinating with the interagency committee to prioritize, fundraise, and implement projects that protect the biodiversity of this iconic species.

C. Brief Project Description (attach additional information to end of application):

MTU is requesting $10,420 from the Future Fisheries Improvement Program to leverage an additional $74,643 from the USFS-RAC grant program and MTU donors to fund fish passage barriers for three at-risk WCT populations. These projects satisfy the highest priority WCT conservation need and are a critical step to secure and increase WCT populations and biodiversity in Southwest Montana. These barriers will secure 17.6 miles of stream that harbor unique, genetically-unaltered or conservation populations (>90% pure) of native WCT, a *Species of Special Concern* in Montana.

Completion of these projects will have broad conservation benefit. The three populations identified in this proposal, Browns, Buffalo, and Painter creeks, are all at an increased risk of hybridization and competition from non-native fish if an adequate isolating mechanism is not installed. Each of these populations are inherently critical for the long-term viability of the species, as well as serving as donor populations for native fish restoration projects elsewhere in the watershed. For example, an impending project in Selway Creek will restore WCT and Arctic grayling to over 40 miles of stream. However, the success of this $1M+ project is ultimately reliant on reintroductions from genetically unaltered WCT populations, including those in Browns and Painter creeks. Additionally, Western Pearlshell Mussels (WPM) are expected to benefit from these WCT security and expansion projects. WCT are the sole native and preferred host fish for WPMs larval stage.

Browns Creek is the most robust WCT population in the Upper Missouri Basin (UMB) and the most important unprotected population in the Red Rock sub-basin. Its genetic diversity is 192% greater than average of all other native populations in the Red Rock sub-basin. Buffalo and Painter Creeks are inhabited by both genetically-pure and minimally hybridized WCT as of the last surveys completed in 2016 and 2017, respectively. Time is of the essence as almost all of our at-risk WCT populations have been hybridized with or replaced by non-native fishes. These populations support some of the last pure isolated WCT in the UMB.

Six-foot wooden drop structures will be installed on Browns and Buffalo creeks to secure 6.5 and 5.6 miles of habitat, respectively. These structures will be tied into the existing road prism to generate drop while causing minimal disturbance. Painter Creek WCT are partially isolated by a perched culvert barrier; however, erosion has caused a pool to form below this barrier. If erosion is allowed to continue and a “jump pool” forms, non-native fish may be able to access the upper creek, threating this population. A hardened splashpad will secure this barrier site and 5.5 miles of habitat. Currently, 88% of the necessary funding has been secured through the U.S. Forest Service Resource Advisory Committee (RAC) grant program and MTU donor funding.

Progress has been made to secure native WCT populations. Over 200-miles in the UMB have been secured in the last 7 years. These three projects will secure an additional 17.6 miles, but more importantly, they will secure irreplaceable genetic diversity which will be utilized to repopulate projects aimed at reestablishing populations of Montana’s state fish.

D. Length of stream or size of lake that will be treated (project extent): _____

Length/size of impact, if larger than project extent (e.g. stream miles opened): 17.6 miles

E. Project Budget:

Grant Request (Dollars):	**$**	**10,420**
Matching Dollars:	**$**	**70,083**
Matching In-Kind Services:*	**$**	

**salaries of government employees are not considered matching contributions*

Total Project Cost: $ 80,503

F. **Attach** itemized (line item) budget – *see budget template*

G. **Attach** specific project plans, detailed sketches, plan views, photographs, maps, evidence of landowner consent, evidence of public support and fish biologist support, and/or other information necessary to evaluate the merits of the project. If project involves water leasing or water salvage complete a *supplemental questionnaire* (fwp.mt.gov/habitat/futurefisheries/supplement2.doc).

H. **Attach** land management & maintenance plans that will ensure protection of the reclaimed area.

III. PROJECT BENEFITS (attach additional information to end of application):

A. What species of fish will benefit from this project?

Westslope cutthroat trout.

B. How will the project protect or enhance wild fish habitat?

The three populations identified in this proposal are all at high risk of hybridization if an adequate isolation mechanism is not installed. The construction and completion of wooden-drop structure fish barriers or hardened splash pad will protect these irreplaceable populations, preserving their genetic integrity and legacy.

Once secured, these populations will be an important broodstock for WCT expansion projects in the UMB. Past, current, and future WCT security and expansion projects ensure that this species will persist in its native range, enhancing the quality of the overall ecosystem in Southwest Montana.

C. Will the project improve fish populations and/or fishing? To what extent?

The construction of these three fish barriers will secure 17.6-miles habitat for native WCT populations, protecting them from non-native fish expansion. WCT will continue to provide a quality angling experience for WCT in their native habitat. The genetically unaltered populations will be important source populations for other WCT expansion projects in the region. Cutthroat trout are opportunistic feeders and are renowned for taking dry flies on the surface.

D. Will the project increase public fishing opportunity for wild fish and, if so, how?

Browns, Painter, and Buffalo creeks are on publicly accessible USFS land. This project will protect and provide the opportunity to catch native WCT their native habitat. Additionally, the genetically unaltered populations identified in this project will be utilized to establish a metapopulation in Selway Creek and upstream tributaries.

E. The project agreement includes a 20-year maintenance commitment. Please discuss your ability to meet this commitment.

Wooden-drop structure fish barriers require very little-to-no maintenance over their 30-50-year (depending on environmental conditions) lifespan. Once the barriers are constructed periodic surveys will occur to ensure a stable and genetically unaltered population persists in the streams. This project will also be tracked through updates to the multiagency *Westslope Cutthroat Trout Status and Conservation within the Beaverhead, Red Rock and Ruby River Sub-basins of Southwest Montana Report*. Furthermore, periodic inspections of the fish barriers will ensure effectiveness and long-term stability of the structures will occur. FWP and USFS staff will complete or facilitate any necessary maintenance.

F. What was the cause of habitat degradation in the area of this project and how will the project correct the cause?

The rapid decline of WCT in the Upper Missouri geography is due to a multitude of anthropogenic causes such as, but not limited to grazing practices, climate change, over-harvest, and the introduction of non-native fish species. These projects will increase secured habitat for WCT, giving FWP the opportunity to conserve and expand wild fish populations.

G. What public benefits will be realized from this project?

This is an integral step towards the interagency goal of increasing WCT distribution from less than 5% to 20% in the UMB. These projects will ensure that Montana's state fish is available to anglers for generations to come.

H. Will the project interfere with water or property rights of adjacent landowners? (explain):

NO

I. Will the project result in the development of commercial recreational use on the site? (explain):

NO

J. Is this project associated with the reclamation of past mining activity?

NO

Each approved project applicant must enter into a written agreement with Montana Fish, Wildlife & Parks specifying terms and duration of the project. The applicant must obtain all applicable permits prior to project construction. A competitive bid process must be followed when using State funds.

IV. AUTHORIZING STATEMENT

I (we) hereby declare that the information and all statements to this application are true, complete, and accurate to the best of my (our) knowledge and that the project or activity complies with rules of the Future Fisheries Improvement Program.

Applicant Signature: _____ Date: 5.29.2020

Sponsor (if applicable): _____

Submittal: **Applications must be *signed and received before* December 1 and June 1 of each year to be considered for the subsequent funding period**. Late or incomplete applications will be rejected.

Mail to:	Montana FWP Fish Management Bureau PO Box 200701 Helena, MT 59620-0701	Email:	Michelle McGree mmcgree@mt.gov (electronic submissions must be signed) For files over 10MB, use https://transfer.mt.gov

Applications may be rejected if this form is modified.

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

Both tables must be completed or the application will be returned

WORK ITEMS (ITEMIZE BY CATEGORY)	NUMBER OF UNITS	UNIT DESCRIPTION*	COST/UNIT	TOTAL COST	CONTRIBUTIONS			
					FUTURE FISHERIES REQUEST	IN-KIND SERVICES**	IN-KIND CASH	TOTAL
Personnel* **								
Survey	10	hours	$90.00	$ 900.00			900.00	$ 900.00
Design				$ -				$ -
Engineering				$ -				$ -
Permitting				$ -				$ -
Oversight	120	Hours	$65.00	$ 7,800.00			7,800.00	$ 7,800.00
				$ -				$ -
			Sub-Total	$ 8,700.00	$ -	$ -	$ 8,700.00	$ 8,700.00
Travel								
Mileage	1840	miles	$0.58	$ 1,058.00			1,058.00	$ 1,058.00
Per diem	15	Days	$45.00	$ 675.00			675.00	$ 675.00
			Sub-Total	$ 1,733.00	$ -	$ -	$ 1,733.00	$ 1,733.00
Construction Materials** **								
Treated Lumber				$33,500	6,920.00		26,580.00	$ 33,500.00
Rip Rap	20	Yard	$100.00	$ 2,000.00			2,000.00	$ 2,000.00
Nails, bolts, etc.	285	Each	$2.00	$ 570.00			570.00	$ 570.00
Native seed	5	Pound	$60.00	$ 300.00			300.00	$ 300.00
Concrete	4	Sq. Yard	$250.00	$ 1,000.00	1,000.00			$ 1,000.00
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
			Sub-Total	$ 37,370.00	$ 7,920.00	$ -	$ 29,450.00	$ 37,370.00
Equipment, Labor, and Mobilization								
Equipment	115	Hours	$105.00	$ 12,075.00			12,075.00	$ 12,075.00
Labor	275	Hours	$55.00	$ 15,125.00			15,125.00	$ 15,125.00
Mobilization	1	Each	$1,250.00	$ 1,250.00	1,250.00			$ 1,250.00
Demobilization	1	Each	$1,250.00	$ 1,250.00	1,250.00			$ 1,250.00
Travel	15	Days	$200.00	$ 3,000.00			3,000.00	$ 3,000.00
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
			Sub-Total	$ 32,700.00	$ 2,500.00	$ -	$ 30,200.00	$ 30,200.00

TOTALS	$ 80,503.00	$ 10,420.00	$ -	$ 70,083.00	$ 80,503.00

OTHER REQUIREMENTS:

All of the columns in the budget table and the matching contribution table MUST be completed appropriately or the application will be invalid. Please see the example budget sheet for additional clarification.

*Units = feet, hours, inches, etc. Do not use lump sum unless there is no other way to describe the costs.

**Can include in-kind materials. Justification for in-kind labor (e.g. hourly rates used for calculations). Describe here or in text.

Reminder: Government salaries cannot be used as in-kind match

***The Review Panel suggests that design and oversight costs associated with a proposed project not exceed 15% of the total project budget. If design and oversight costs are in excess of 15%, applications must include a minimum of two competitive bids for the cost of undertaking the project.

****The Review Panel recommends a maximum fencing cost of $1.50 per foot. Additional costs may be the responsibility of the applicant and/or partners.

MATCHING CONTRIBUTIONS (do not include requested funds)

CONTRIBUTOR	IN-KIND SERVICE	IN-KIND CASH	TOTAL	Secured? (Y/N)
Beaverhead-Deerlodge National Forest - RAC Grant	$ -	$ -	$ 70,083.00	Y
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
TOTALS	$ -	$ -	$ 70,083.00	

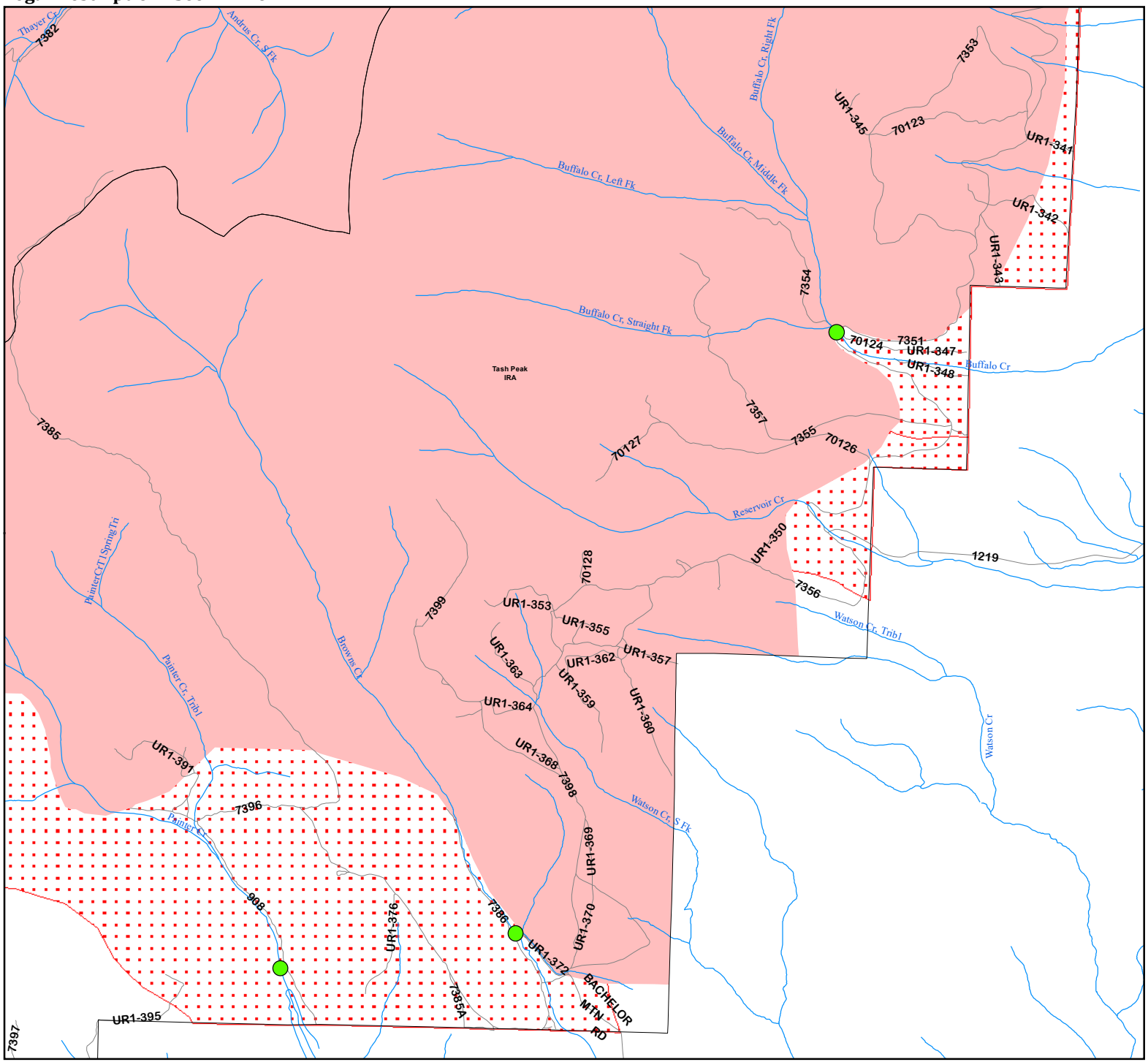
Bender Barrier Location

Big Hole Divide fish barriers

0 0.375 0.75 1.5

Miles

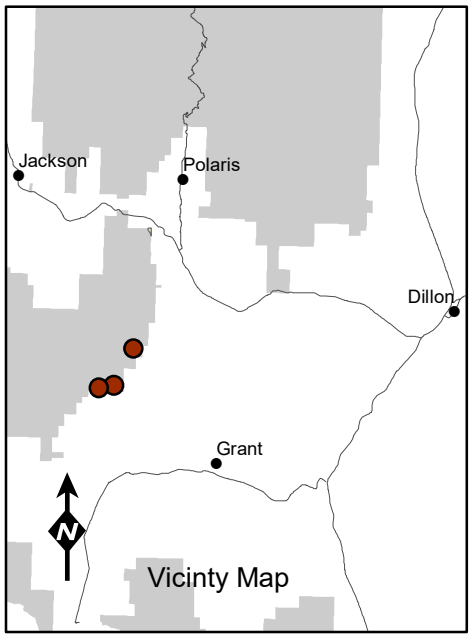
Legal Description: See PIF from



Legend

013-2020

- Project Sites
- Streams
- Routed Roads
- Inventoried Roadless Areas - LOCAL
- Fisheries
- Restoration
- Other Ownership
- USDA Forest Service



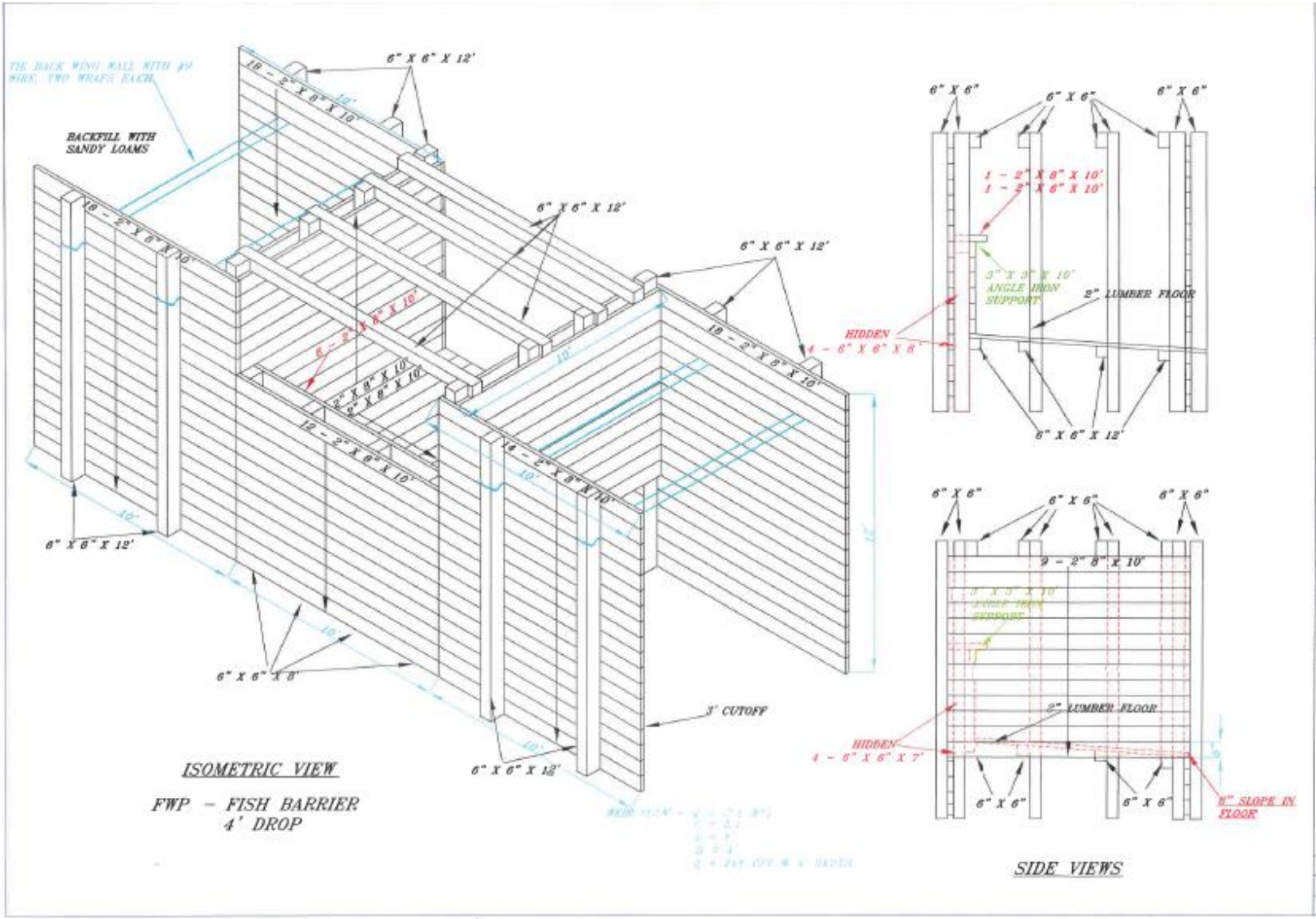
This map is intended to depict physical features as they generally appear on the ground and may not be used to determine title, ownership, legal boundaries, legal jurisdiction, including jurisdiction over roads or trails, or access restrictions that may be in place on either public or private land. The USDA Forest service makes no warranty, expressed or implied, including the warranties of merchantability and fitness for a particular purpose, nor completeness or utility of these geospatial data, or for the improper or incorrect use of these geospatial data. These geospatial data and related maps or graphics are not legal documents and are not intended to be used as such. The data and maps may not be used to determine title, ownership, legal descriptions or boundaries, legal jurisdiction, or restrictions that may be in place on either public or private land. Natural hazards may or may not be depicted on the data and maps, and land users should exercise due caution. The data are dynamic and may change over time. The user is responsible to verify the limitations of the geospatial data and to use the data accordingly.

Kevin Weinner
11/20/2019

Created By: Printed

This map replaces all versions of same title printed with prior dates

T:\FS\NFS\BeaverheadDeerlodge\Project\SNEPA\GIS\d8_pintler\KnightLivestockSUP\Products\KnightLivestockVicinityMap8.5x11.pdf


TIE BACK WING WALL WITH #9 WIRE, TWO WRAPS EACH.
BACKFILL WITH SANDY LOAMS
6" X 6" X 12'
18 - 2" X 8" X 10'
10'
6" X 6" X 12'
6" X 6" X 12'
18 - 2" X 8" X 10'
6 - 2" X 8" X 10'
2" X 8" X 10'
2" X 8" X 10'
12 - 2" X 8" X 10'
14 - 2" X 8" X 10'
10'
12'
6" X 6" X 12'
6" X 6" X 8'
3' CUTOFF
6" X 6" X 12'
ISOMETRIC VIEW
FWP - FISH BARRIER
4' DROP
6" X 6"
6" X 6"
6" X 6"
1 - 2" X 8" X 10'
1 - 2" X 8" X 10'
3" X 3" X 10' ANGLE IRON SUPPORT
2" LUMBER FLOOR
HIDDEN
4 - 6" X 6" X 8'
6" X 6" X 12'
6" X 6"
6" X 6"
6" X 6"
9 - 2" 8" X 10'
3" X 3" X 10' ANGLE IRON SUPPORT
2" LUMBER FLOOR
HIDDEN
4 - 6" X 6" X 7'
6" X 6"
6" X 6"
6" SLOPE IN FLOOR
SIDE VIEWS
RE MILLER & SONS
15 RAMS HORN
DILLON, MT. 59725
1-406-683-2175
FISH BARRIER
BENDER CREEK PROJECT
MONTANA FISH WILDLIFE & PARKS
BEAVERHEAD COUNTY
MONTANA
RE MILLER & SONS CONTRACTING - DILLON, MONTANA

USDA United States Department of Agriculture Forest Service
Beaverhead-Deerlodge National Forest
Dillon Ranger District
420 Barrett Street
Dillon, MT 59725
406-683-3900

File Code: 2600
Date: May 19, 2020

Montana Fish, Wildlife, and Parks
Fisheries Division
c/o Michelle McGree
Future Fisheries Program Officer
1420 E. Sixth Ave.
PO Box 200701
Helena, MT 59620

Dear Future Fisheries Review Panel,

I would like to provide my enthusiastic support for Montana Trout Unlimited's proposal for the Big Hole Divide Native Westslope Cutthroat Trout Security project. This proposal would provide critical funding to secure three important populations of Westslope Cutthroat Trout (WCT) and 17.6 miles of their habitat on the Beaverhead-Deerlodge National Forest (BDNF) Dillon Ranger District.

Restoration is a priority for the BDNF and this project is aligned with BDNF Forest Plan goals for WCT conservation and aquatic nuisance species management. Implementation of this project will protect and secure three at-risk WCT populations that serve as an important source of fish used for WCT repatriation efforts elsewhere in the watershed and are vital for the long-term viability of the species. I am committed to working collaboratively to improve watershed health on the BDNF Dillon Ranger District and I am excited to be working with Montana Trout Unlimited on this effort.

I endorse the proposal and I am happy to have a qualified team with a local presence in Southwestern Montana leading the effort.

Sincerely,

Jamie Tripp

JAMIE TRIPP
District Ranger

FWP.MT.GOV THE OUTSIDE IS IN US ALL.

730 ½ N. Montana • Dillon, MT 59725 • (406) 531-5861 • rkreiner@mt.gov

May 29, 2020

Montana Fish, Wildlife & Parks
Future Fisheries Improvement Program
1420 E. Sixth Ave.
P.O. Box 200701
Helena, MT 59620-0701

Montana Fish, Wildlife & Parks (FWP) is in full support of the Big Hole Divide Native Westslope Cutthroat Trout Security proposal recently submitted to the Future Fisheries Improvement Program by Trout Unlimited. This project proposal is requesting funding for the construction of two wooden-drop structures and a concrete splash pad to serve as or improve fish barriers to non-native species on three westslope cutthroat trout (WCT) streams. Successful construction of these barriers will secure over 17 miles of habitat for three genetically pure or conservation (>90% pure) populations of WCT.

Buffalo Creek in the Beaverhead River watershed contains a conservation population of WCT which most recently tested as 99.5% pure in 2018. In 2006, this population consisted of pure WCT but by at least 2016 they were partially hybridized. As a result, this population has been classified as "At-Risk." A successful barrier project would preserve 5.6 miles of conservation habitat in Buffalo Creek.

Browns Creek in the Red Rock River watershed contains a population of genetically pure WCT which was most recently tested in 2017. However, this population is still considered "At-Risk" because of threat of hybridization. The only mechanism presently isolating this population from downstream non-native fish is a wet meadow that irrigation water is spread across. A successful barrier project would preserve 6.5 miles of conservation habitat in Buffalo Creek.

Painter Creek in the Red Rock River watershed contains a conservation population of WCT which most recently tested as 100% pure in 2018. However, rainbow and hybridized trout were downstream of the present culvert barrier, which may not serve as a barrier at high flows. As a result, this population has been classified as "At-Risk". Installation of a concrete splash pad would eliminate the staging pool below the culvert, significantly improve the performance of this barrier, and preserve 5.5 miles of conservation habitat in Painter Creek.

Greater than 200 miles of WCT habitat has been secured in the upper Missouri River drainage over the past seven years. This project follows conservation policies developed by FWP and its partners for the long-term preservation of this species. These three barriers will add 17.6 miles of secure WCT habitat. Additionally, these projects will provide important source populations of WCT for future conservation projects. Future projects will continue with the goal of ultimately preserving over 500 miles of pure WCT habitat.

Thanks for your consideration!

Ryan Kreiner (FWP Region 3 Native Species Biologist)